

I CLAIM:

1. A method of assembling a semiconductor device comprising the steps of:
  - providing a plurality of sockets on the mounting surface of an IC;
  - providing a plurality of projections on the mounting surface of a PCB;
  - positioning the IC and the PCB such that a plurality of the sockets and a plurality of the projections are in alignment; and
  - affixing the IC to the PCB whereby the aligned sockets and projections maintain the proper positioning of the IC and the PCB.
2. A method according to claim 1 further comprising the step of subsequently detaching the IC from the PCB.
3. A method according to claim 2 further comprising the step of subsequently reaffixing the IC to the PCB.
4. A method according to claim 1 wherein the step of affixing the IC to the PCB further comprises the step of reflowing solder there-between.
5. A method according to claim 1 wherein the step of providing projections on the mounting surface of the PCB further comprises a step of applying high melting point solder to selected locations on the PCB.



6. A method according to claim 1 wherein the step of providing projections on the mounting surface of the PCB further comprises a step of attaching metallic projections to selected locations on the PCB.
7. A method according to claim 1 wherein the step of providing projections on the mounting surface of the PCB further comprises a step of attaching metallic projections to selected locations on the PCB using high melting point solder.
8. A method according to claim 1 wherein the step of affixing the IC to the PCB further comprises a step of applying low melting point solder to the sockets of the IC.
9. A method according to claim 8 further comprising the step of subsequently detaching the IC from the PCB by reflowing the low melting point solder.
10. A method according to claim 1 wherein the step of providing a plurality of sockets on the mounting surface of the IC further comprises steps of patterning and etching selected locations on the mounting surface.
11. A method according to claim 1 wherein the step of providing a plurality of sockets on the mounting surface of the IC further comprises a step of drilling selected locations on the mounting surface.



12. A method according to claim 1 wherein the step of providing a plurality of sockets on the mounting surface of the IC further comprises a step of punching selected locations on the mounting surface.

13. A semiconductor assembly comprising:

- a IC having a plurality of metallic sockets arrayed on a mounting surface;

- a PCB having a plurality of metallic projections arrayed on a mounting surface;

- wherein the PCB and IC are positioned so that a plurality of the sockets adjoin a plurality of the projections; and

- a plurality of solder joints coupling the IC sockets adjoining the PCB projections.

14. A semiconductor assembly according to claim 13 wherein the solder joints are detachable.

15. A semiconductor assembly according to claim 13 wherein the solder joints comprise low melting point solder.

16. A semiconductor assembly according to claim 13 wherein the projections on the mounting surface of the PCB further comprise high melting point solder.



17. A semiconductor assembly according to claim 13 wherein the projections on the mounting surface of the PCB further comprise metallic nodes affixed to selected locations on the PCB.

18. A semiconductor assembly according to claim 13 wherein the projections on the mounting surface of the PCB further comprise metallic nodes affixed to selected locations on the PCB by high melting point solder.

19. A BGA assembly comprising:

- a IC having a plurality of metallic sockets arrayed on a mounting surface;

- a PCB having a plurality of metallic projections arrayed on a mounting surface;

- wherein the PCB and IC are positioned so that a plurality of the sockets adjoin a plurality of the projections; and

- a plurality of solder joints coupling the IC sockets adjoining the PCB projections.

20. A BGA assembly according to claim 19 wherein the solder joints are detachable.

21. A BGA assembly according to claim 19 wherein the solder joints comprise low melting point solder.



22. A BGA assembly according to claim 19 wherein the projections on the mounting surface of the PCB further comprise high melting point solder.

23. A BGA assembly according to claim 19 wherein the projections on the mounting surface of the PCB further comprise metallic nodes affixed to selected locations on the PCB.

24. A BGA assembly according to claim 19 wherein the projections on the mounting surface of the PCB further comprise metallic nodes affixed to selected locations on the PCB by high melting point solder.